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SPECIFICATION

1. NAME OF INVENTION
COSMETIC

2. SCOPE OF PATENT CLAIMS

A cosmetic comprised by blending one or two or more compounds selected from a group comprising amino sugars, N-acetylamino sugars, and salts thereof.

3. DETAILED DESCRIPTION OF THE INVENTION

The present invention is characterized in that an amino acid obtained by decomposing a natural polysaccharide, mucopolysaccharide, or glycoprotein by an acid, base, enzyme, or other such means is blended as a cosmetic component, and the present invention offers a novel cosmetic which provides smoothness and a moist feeling to the skin and increases effects of gloss and finish on the hair.

Conventionally, various ingredients extracted from natural materials, for example, proteins, polysaccharides, extracts, natural polymers, and other such substances have been used frequently in cosmetics for their distinctive effects in use. Monomers or oligomers that structure these substances, for example, amino acids, peptides, and the like, have also been used for similar purposes.

In light of the foregoing background, the present inventors completed the present invention as a result of repeated and painstaking research intended to obtain natural ingredients useful for the skin and hair and the like; by focusing on N-acetyl-D-glucosamine and D-glucosamine that are structural units of structural polysaccharides found in the exoskeletons of insects and crustaceans, as well as N-acetyl-galactosamine and D-galactosamine and the like that are structural units of polysaccharides, glycoproteins, and glycolipids in vertebrate animals; and by blending such substances into cosmetic bases.

Specifically, the present invention is a cosmetic comprised by blending one or two or more compounds selected from a group comprising amino sugars, N-acetylamino sugars, and salts thereof.

The amino sugars, N-acetylamino sugars, and salts thereof used in the present invention are monosaccharides or polyalcohols or derivatives thereof which have an amino group in their molecule and are obtained by decomposing, by an acid, base, enzyme, or other such means, chitin in the exoskeletons of insects or in those of crabs or other crustaceans, or by similarly decomposing polysaccharides, particularly mucopolysaccharides, glycoproteins, glycolipids, or other such natural polymers in animals or plants; examples include N-acetyl-D-glucosamine, N-acetyl-D-galactosamine, D-glucosamine, D-galactosamine, and hydrochlorides and sulfates thereof.

The amino sugars, N-acetylamino sugars, and salts thereof noted above include di- and triamino sugars in addition to monoamino sugars.

Amino sugars, N-acetylamino sugars, or salts thereof in the present invention are compounded in a cosmetic at a level of 0.001-30 wt%, and a level on the order of 0.1-5.0 wt% is desirable for demonstrating the effect of the present invention and also having no stickiness or other such adverse effects in the form of a cosmetic.

Other than the above-noted essential components, ingredients compounded in the cosmetic pertaining to the present invention may include oils, water, surfactants, moisture retainers, alcohols, thickeners, fragrances, antioxidants, chelating agents, pigments, preservatives, and other such ingredients used in a typical cosmetic.

The cosmetic pertaining to the present invention has a smooth feel, moisture-retaining effect, softening effect, and activating effect on the skin and imparts resilience and gloss to the skin. Said cosmetic also has a moisture-retaining effect and softening effect on the hair, imparts gloss to the hair, and improves combing properties.

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The effect of the present invention is next described in detail by way of preferred embodiments and comparative embodiments. The present invention is not limited thereby. In the embodiments, % indicates weight percent.

PREFERRED EMBODIMENT 1 Facial Lotion

| | | |
|------|----------------------------------|-----------|
| (1) | Glycerin | 5.0% |
| (2) | Citric acid | 0.03 |
| (3) | Sodium citrate | 0.05 |
| (4) | Allantoin | 0.1 |
| (5) | Ethanol (95%) | 10.0 |
| (6) | POE (15 mol) oleyl alcohol ether | 1.0 |
| (7) | D-glucosamine hydrochloride | 1.0 |
| (8) | Ultraviolet light absorber | 0.1 |
| (9) | Fragrance | 0.1 |
| (10) | Preservative | 0.1 |
| (11) | Pigment | As needed |
| (12) | Ion exchange water | 82.52 |

(MANUFACTURING METHOD)

Ingredients (5), (6), (9), and (10) were dissolved by blending at ambient temperature and were then added by stirring into ingredients (1), (2), (3), (4), (7), (8), (11), and (12) dissolved by blending in similar fashion, and a facial lotion was obtained.

COMPARATIVE EMBODIMENT 1

A facial lotion was obtained by a manufacturing method similar to that in Preferred Embodiment 1, entirely by the same formula as in Preferred Embodiment 1, with the exception that Ingredient (7), D-glucosamine hydrochloride, was omitted from Preferred Embodiment 1.

The evaporation rates of Preferred Embodiment 1 and Comparative Embodiment 1 were determined by the test method described below. Samples of 0.2 cc were placed on a 1×1 cm filter paper, the amount of moisture evaporating under conditions of 25°C and 50% relative humidity was measured, and evaporation rates were determined by dividing these amounts by time. Table 1 presents the results.

| | Preferred Embodiment 1 (mg/min) | Comparative Embodiment 1 (mg/min) |
|------------------|------------------------------------|--------------------------------------|
| Evaporation rate | 6.5 | 9.0 |

As shown in Table 1, Preferred Embodiment 1, in which 1% amino sugar had been blended, demonstrated a slower evaporation rate and higher moisture retention.

PREFERRED EMBODIMENT 2 O/W Cream

| | | |
|------|----------------------------------|------|
| (1) | Glycerin | 5.0% |
| (2) | PEG 400 | 2.0 |
| (3) | Glycyrrhizin ammonium salt | 0.1 |
| (4) | Allantoin | 0.1 |
| (5) | N-acetyl-D-glucosamine | 1.0 |
| (6) | Cetanol | 4.0 |
| (7) | Squalane | 5.0 |
| (8) | Stearic acid | 1.0 |
| (9) | Beeswax | 1.0 |
| (10) | Vaseline | 1.0 |
| (11) | POE (25 mol) cetyl alcohol ether | 2.0 |
| (12) | Glyceryl monostearate | 1.5 |
| (13) | Preservative | 0.1 |
| (14) | Fragrance | 0.15 |

(15) Ion exchange water 76.55

(MANUFACTURING METHOD)

Ingredients (5)-(14) were dissolved by blending at 70°C and were then emulsified by stirring and dissolving into ingredients (1), (2), (3), (4), and (15) dissolved by blending in similar fashion. Emulsified particles were prepared with a homogenizer, and a cream was then obtained by cooling the material to ambient temperature with a heat exchanger.

PREFERRED EMBODIMENT 3 Pack

| | | |
|-----|-----------------------------|-------|
| (1) | Polyvinyl alcohol | 10.0% |
| (2) | PEG 4000 | 0.4 |
| (3) | Glycerin | 3.0 |
| (4) | Ethanol (95%) | 8.0 |
| (5) | D-acetyl-galactrimine [sic] | 0.1 |
| (6) | Preservative | 0.1 |
| (7) | Fragrance | 0.1 |
| (8) | Ion exchange water | 78.3 |

(MANUFACTURING METHOD)

A pack was obtained by blending and dissolving ingredients (4)-(7) at ambient temperature, stirring and adding these ingredients into ingredients (1), (2), (3), and (8) dissolved by blending at 80°C, and then cooling the material to ambient temperature.

PREFERRED EMBODIMENT 4 Lipstick

| | | |
|-----|--------------------------|-----------|
| (1) | Castor oil | 20.0% |
| (2) | Cetyl alcohol | 20.0 |
| (3) | Beeswax | 5.0 |
| (4) | Candelina wax | 30.0 |
| (5) | N-acetyl-D-glucosamine | 2.0 |
| (6) | Squalane | 13.0 |
| (7) | Carnauba wax | 5.0 |
| (8) | Pigment (coloring agent) | 5.0 |
| (9) | Fragrance | As needed |

(MANUFACTURING METHOD)

A stick-form lipstick was obtained by dissolving and blending ingredients (1)-(9) at 80°C, pouring these ingredients into a mold and cooling to ambient temperature, and then removing the material from the mold.

PREFERRED EMBODIMENT 5 Hair Rinse

| | | |
|-----|-----------------------------------|-----------|
| (1) | Alkyltrimethylammonium chloride | 3.0% |
| (2) | Cetyl alcohol | 1.0 |
| (3) | D-glucosamine hydrochloride | 2.0 |
| (4) | Preservative | 0.1 |
| (5) | Glycerin | 5.0 |
| (6) | Fragrance | 0.3 |
| (7) | Coloring | As needed |
| (8) | Ion exchange water | 88.0 |
| (9) | POE (8 mol) stearyl alcohol ether | 0.6 |

(MANUFACTURING METHOD)

A hair rinse was obtained by heating, stirring, and dissolving ingredients (1)-(9) at 70°C and then cooling the material to ambient temperature with a heat exchanger.

COMPARATIVE EMBODIMENT 2

A hair rinse was obtained by a manufacturing method similar to that in Preferred Embodiment 5, by the same formula as in Preferred Embodiment 5, with the exception that ingredient (3), D-glucosamine hydrochloride, was omitted.

Practical usage testing of Preferred Embodiment 5 and Comparative Embodiment 2 was carried out by a 20-person panel of females age 20-30 who evaluated hair gloss and combing properties. The results demonstrated the effect of the hair rinse pertaining to the present invention, with 19 individuals stating that Preferred Embodiment 5 was good, and 1 individual stating that Comparative Embodiment 2 was good.

PREFERRED EMBODIMENT 6 Hair Tonic

| | |
|--|--------|
| (1) Ethanol (95%) | 50.0% |
| (2) Glycerin | 1.0 |
| (3) POE (60 mol) hardened castor oil ether | 1.0 |
| (4) Fragrance | 0.5 |
| (5) N-acetyl-D-glucosamine | 0.005 |
| (6) Hinokitiol | 0.005 |
| (7) Ion exchange water | 47.490 |

A hair tonic was obtained by stirring and dissolving ingredients (1) and (3)-(6) at ambient temperature, and adding ingredients (2) and (7) thereto while stirring.

PREFERRED EMBODIMENT 7 Cream-Form Cleansing Material

| | |
|-------------------------|------|
| (1) Lauric acid | 7.0% |
| (2) Myristic acid | 13.0 |
| (3) Palmitic acid | 5.0 |
| (4) Beeswax | 1.0 |
| (5) Stearyl alcohol | 2.0 |
| (6) Batyl alcohol | 2.0 |
| (7) Dipropylene glycol | 10.0 |
| (8) PEG 300 | 10.0 |
| (9) Glycerin | 5.0 |
| (10) Sodium hydroxide | 2.0 |
| (11) D-galactosamine | 10.0 |
| (12) D-glucosamine | 10.0 |
| (13) Fragrance | 0.2 |
| (14) Ion exchange water | 22.8 |

(MANUFACTURING METHOD)

Ingredients (13) and (1)-(6) were dissolved by heating and stirring at 70°C and were then added and stirred into ingredients (7)-(12) which had been dissolved by blending in similar fashion. The material was homogenized then cooled to ambient temperature with a heat exchanger, and a cleansing cream was obtained.

COMPARATIVE EMBODIMENT 3

A cream-form cleansing material was obtained by a manufacturing method similar to that in Preferred Embodiment 7, by the same formula as in Preferred Embodiment 7, with the exception that ingredients (11) and (12) were omitted, and ingredient (10), sodium hydroxide, was set at 5.0%.

Practical usage testing of Preferred Embodiment 7 and Comparative Embodiment 3 was carried out by a 20-person panel of females age 20-40 who evaluated foundation and other makeup removal characteristics and feel after use. In the results, the evaluation of all 20 participants was that the delipidation strength of Preferred Embodiment 7 was mild, there was no tightening of skin, and there was a suitable cleansing effect.